



Patent
Attorney's Docket No. 024444-983

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)	
Katarina DAHL et. al.)	Group Art Unit: 3722
Application No.: 09/987,941)	Examiner: Erica E. Cadugan
Filed: November 16, 2001)	Confirmation No.: 7925
For: Method of Milling Engine Blocks)	

REQUEST FOR RECONSIDERATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Official Action dated January 27, 2004, reconsideration and allowance of the present application are respectfully requested. Claims 1-4 remain pending in the application.

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CLAIM REJECTIONS UNDER 35 U.S.C. §102

Claim 3 stands rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,961,757 to Rhodes et al. (hereafter "*Rhodes et al.*") on the grounds set forth in paragraph 4 of the Official Action.

The present application is directed to methods of dry milling materials. In claim 3, the claim at issue here, the method dry mills a composite material. As disclosed at paragraph [0009] of the application, an example of a composite material is aluminum in combination with cast iron.

The Official Action relies upon the disclosure in *Rhodes et al.* *Rhodes et al.* discloses dry milling of gray cast iron. See column 7, line 37. The Examiner refers

to a definition of composite from Merriam Webster's Collegiate Dictionary, 10th ed., and combines this with the ASM Handbook, Vol. 20, Materials Selection and Design description of gray cast iron to conclude that gray cast iron is a composite.

However, the Examiner's reliance upon the combination of these auxiliary references is misfounded and, furthermore, not consistent with the teachings of material science and/or metallurgy. For example, the Metals Handbook Desk Edition, Second Edition, from ASM International beginning at page 307 describes cast iron and the basic metallurgy of cast iron. Of the five types of cast iron, gray iron, e.g., the material disclosed in *Rhodes et al.*, is described as having a lamellar graphite carbon-rich phase in a matrix of pearlite. See, for example, Table 1, page 307. This is not a composite. The Metals Handbook Desk Edition, Second Edition, from ASM International at page 14 defines a composite in the field of metallurgy as a combination of two or more materials (reinforcing elements, fillers, and composite matrix binder), differing in form or composition on a macro scale. Examples of composite materials include cermets and metal-matrix composites. The referenced pages of the Metals Handbook Desk Edition, Second Edition are enclosed for the convenience of the Examiner.

The Examiner's reliance upon Merriam Webster's Collegiate Dictionary definition for composite is inappropriate in this rejection. First, one of ordinary skill in the art of metallurgy would not rely upon the Collegiate Dictionary for the definition of composite. Rather, one of ordinary skill in the art would refer to the ASM Handbook. Indeed, the Examiner herself refers to and relies upon the ASM Handbook, Vol. 20 for the definition of gray cast iron. Thus, it is only appropriate to also refer to the definitions and glossary of terms contained in a metallurgy handbook, which would

be the natural choice of one of ordinary skill in the art to refer. In the enclosed portions of the Metals Handbook Desk Edition, Second Edition, it can be seen that a definition of composite material more appropriate for reference in this application would exclude the definition of gray cast iron put forward by the Examiner. In other words, graphite flakes as a predominant microstructural feature would not qualify gray cast iron as a composite under the ASM definition. Indeed, the examples provided by the ASM Handbook definition would not include gray cast iron.

Because the references relied upon by the Examiner to sustain this rejection are inappropriate and do not contain each and every element of Applicants' claim 3, it is respectfully asserted that an anticipatory rejection is improper. Indeed, defining of the term composite by reference to Merriam Webster's Collegiate Dictionary, as opposed to the ASM reference, is improper and requires withdrawal of the rejection.

Based on the above comments, withdrawal of this rejection is respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claim 4 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Rhodes et al.* on the grounds set forth in paragraph 5 of the Official Action. For at least the reasons noted below, this rejection should be withdrawn.

Claims 1-4 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,655,860 to Oles (hereafter "*Oles*") on the grounds set forth in paragraph 6 of the Official Action. For at least the reasons noted below, this rejection should be withdrawn.

With respect to the rejection of 35 U.S.C. §103 over the disclosure in *Rhodes et al.*, Applicants' comments above in the discussion regarding the anticipatory rejection based on *Rhodes et al.* also apply to the obviousness rejection of claim 4. In other words, the Examiner's reliance upon the disclosure in *Rhodes et al.* of gray cast iron and the attribution of gray cast iron as a composite material is inappropriate. Accordingly, the elements of claim 4 cannot be obvious in view of the disclosure of *Rhodes et al.* because *Rhodes et al.* fails to disclose the milling of a composite material and rather discloses the milling of a two-phase alloy of gray cast iron. Withdrawal of this rejection is respectfully requested.

The rejection relying upon the disclosure in *Oles* is an improper obviousness rejection and should be withdrawn. There are three basic criteria to establish a *prima facie* case of obviousness. First, there must be a suggestion or a motivation to modify the reference or to combine the teachings relied upon by the Examiner. Second, there must be a reasonable expectation of success for the proposed modification or combination. Third, the references must teach or suggest all of the claim limitations. See, for example, M.P.E.P. §§2143-2143.03.

Here, the Examiner has relied upon the disclosure in *Oles* to the use of a silicon nitride wiper insert and, referencing the generic description of milling and wiping positions, draws the conclusion that these positions are interchangeable and meet the standard of obviousness set out in the M.P.E.P. Applicants respectfully disagree.

The Examiner has based the rejection of claims 1-4 over the disclosure in *Oles* on obviousness design choice rationale. See, for example, the Examiner's comments on page 6, second paragraph. However, a proper rejection must state

specific reasons why a feature is simply a matter of design choice and therefore obvious. Otherwise, a rejection without these elements fails to contain the necessary elements to establish a *prima facie* case. See, for example, In re Chu, 36 USPQ2d 1089 (Fed. Cir. 1995).

Here, the grounds for rejection fail to offer any explanation as to why one of ordinary skill in the art would have considered the proposed modification obvious, apart from the unsupported assertion that exchanging the location of the silicon nitride insert from the wiper position to the milling position would have been an obvious matter of design choice. Furthermore, the Examiner has not pointed to any disclosure or reference that suggests the use of silicon nitride in the milling position in combination with a second grade material at the wiping position. Therefore, the grounds of rejection fail to contain the elements necessary to establish a *prima facie* case of obviousness. See, e.g., M.P.E.P. §706.02(j).

The Federal Circuit has held that, under similar facts, reliance upon an unsupported allegation of "design choice" is insufficient to establish a *prima facie* case of obviousness. See In re Chu. By implication, the rejection outlined in the Official Action relying upon obvious design choice is equally flawed and therefore insufficient to establish a *prima facie* case of obviousness.

From the above, Applicants respectfully assert that the disclosure in *Oles* does not disclose, teach or suggest Applicants' claims 1-4. Nor has the Official Action established a *prima facie* case of obviousness based on that disclosure. Withdrawal of these rejections is respectfully requested.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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